

Zooplankton.

Sheet 44.

COPEPODA

SUB-ORDER: CALANOIDA

Family: Aetideidae

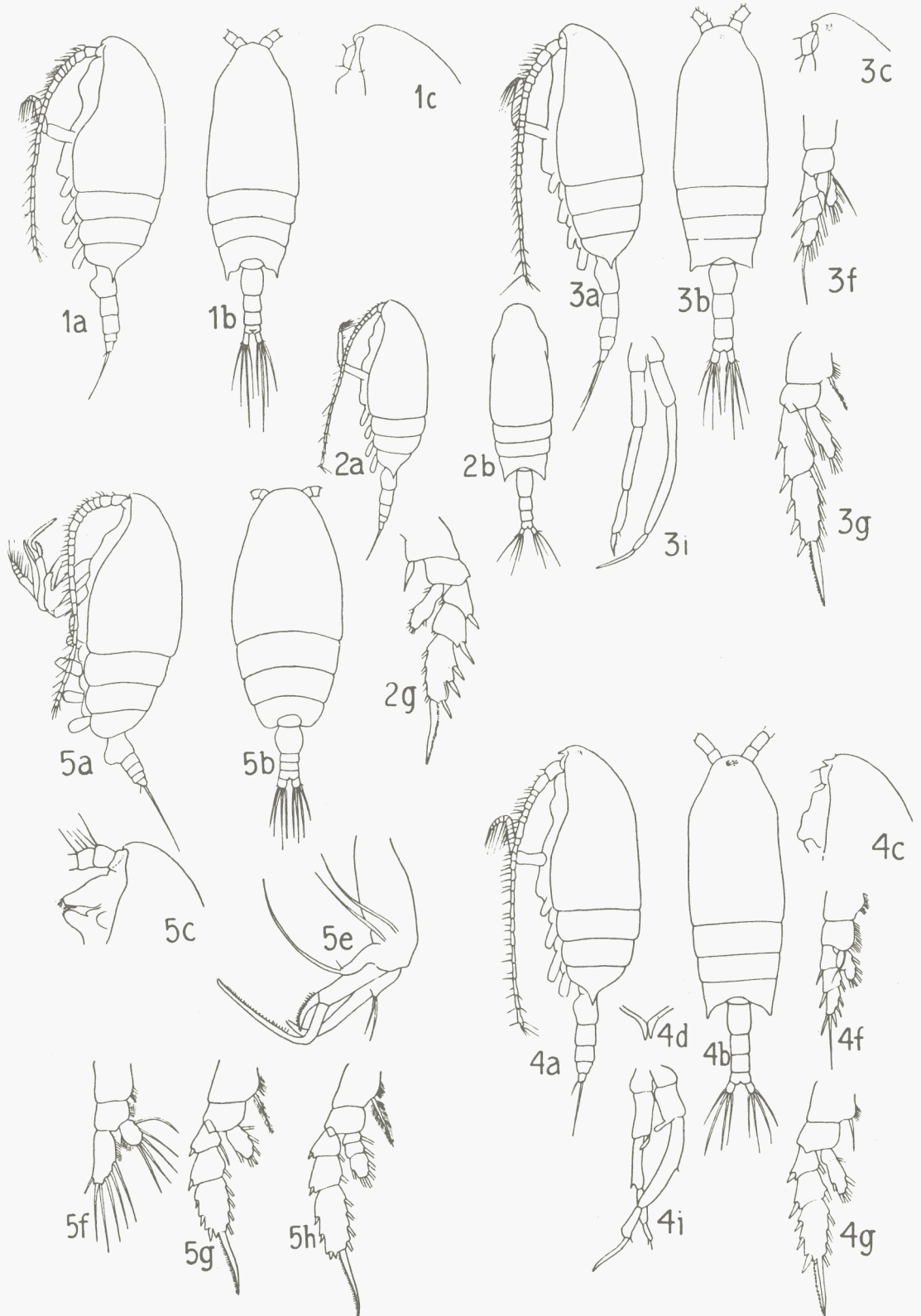
GENERA: CHIRIDIUS

PSEUDAETIDEUS

CHIRIDIELLA

(By W. Vervoort)

1952.



Genus CHIRIDIUS Giesbrecht, 1892

Cephalon and 1st thoracic somite as well as the 4th and 5th thoracic somites fused. Postero-lateral thoracic border acutely pointed, points backwardly directed, of reduced length in male. Rostrum completely absent. 1st antennae 24-jointed in the female; with a reduced number of joints in the male. 1st and 2nd feet with 1-jointed endopods; endopods of the 3rd and 4th feet 3-jointed. Exopodal joints of 1st feet all with spines on outer edges. Mouth parts of female as in *Aetideopsis*. Males with reduced oral parts, 5th feet — of males known at present — uniramous on both sides, elongated, 4–5 jointed, without traces of endopods. Terminal spines on exopods of 2nd to 4th feet in both sexes with 22 to 28 strong spines along external margin.

1. *Chiridius poppei* Giesbrecht, 1892. ♀ 1.63–1.88 mm. Body slender, cephalon smoothly rounded. Points of thoracic border reach middle of the genital segment. Abdomen $\frac{1}{3}$ the length of cephalothorax. Genital segment about as long as wide, furcal rami about as long as wide. 1st antennae in preserved specimens usually directed forwards, basal parts running parallel, of about the length of the cephalothorax. Distal margins of endopods of 2nd feet reach beyond segmentations between 2nd and 3rd exopodal joints.
Deep and moderately deep water of Atlantic.
2. *Chiridius gracilis* Farran, 1908. ♀ 2.4–2.8 mm. Resembles the preceding form very much, but slightly more robust, cephalon flattened, distinctly dilated in oral region. Abdomen shorter, about $\frac{1}{4}$ the length of cephalothorax. Points of lateral thoracic margin reach beyond middle of genital segment. Distal margins of endopods of 2nd feet do not reach the articulations between 2nd and 3rd exopodal joints.
Moderately deep water of temperate Atlantic.
3. *Chiridius obtusifrons* G. O. Sars, 1903. ♀ 3.5–4.2 mm., ♂ 2.9 mm.
♀. Body robust, postero-lateral thoracic border produced into short, slightly diverging points, covering only a small portion of genital segment of abdomen. Abdomen half the length of cephalothorax, furcal rami about twice as long as broad. 1st antennae slightly longer than cephalothorax. Endopods of 1st and 2nd feet 1-jointed, of 3rd and 4th feet apparently 2-jointed, as the division between the 2 distal joints of the endopod is very indistinct.
♂. Smaller than female, with some of joints of 1st antennae coalescent. Both 5th feet uniramous, elongate, $\frac{2}{3}$ the length of abdomen, each 5-jointed.
Moderately deep water of N. Atlantic and Arctic.

Genus PSEUDAETIDEUS Wolfenden, 1903

Closely allied to *Chiridius*, especially *C. obtusifrons*, but differing by the presence of a distinct, though small, bifid rostrum. Endopods of 2nd feet 2-jointed. 5th feet of males with rudiments of 1-jointed endopods on both sides; left exopod styliform, right exopod with 2 apical joints, forming a slender claw.

4. *Pseudaetideus armatus* (Boeck, 1872). ♀ 4.0–4.5 mm., ♂ 2.9–4.0 mm.
♀. Body robust; living animal with bright red eye spot at base of 1st antennae. Postero-lateral thoracic border produced into acute, backwardly directed spines, reaching middle of genital segment. Furcal rami slightly longer than broad. 1st antennae reach end of 2nd abdominal segment.
♂. Oral parts reduced, palps of mandibles strongly developed, especially the endopods, which have coarse setae at their apices. 5th feet about $\frac{2}{3}$ the length of abdomen, with small rudiments of endopods on both sides; left foot styliform, apical joint of right exopod forming a slender claw with preceding joint.
Deep and moderately deep water of N. Atlantic and Arctic seas.

Genus Chiridiella G. O. Sars, 1907

The members of this genus are at once distinguished by the structure of the 2nd maxillae, the apical lobes of which are provided with some strong, curved denticulate hooks. Rostrum absent. Cephalon and 1st thoracic somites fused or indistinctly separated. 4th and 5th thoracic somites fused, postero-lateral thoracic border rounded. Feet reduced, short. Exopods of 1st feet 1-jointed, each with a single spine on outer edge, endopods 1-jointed. Endopods of 2nd feet 1-jointed, exopods 3-jointed. 3rd and 4th feet with 3-jointed exo- and endopods. Maxillipeds with elongated basal joints. Males unknown.

5. *Chiridiella macrodactyla* G. O. Sars, 1907. ♀ 2.7 mm. 2nd maxillae each with 4 lobes. 1st lobe with 2, 2nd with 1 comparatively fine seta. 3rd lobe with a short, haired hook and a long, rectangularly bent hook, denticulate at the apex. 4th lobe with a curved, strong hook. 1st antennae short, reaching end of 3rd thoracic somite. Genital segment with a huge genital tubercle.
Deep water of temperate Atlantic.

Legends for Figures on p. 2.

- 1, *Chiridius poppei*. 2, *Chiridius gracilis*. 3, *Chiridius obtusifrons*. 4, *Pseudaetideus armatus*.
5, *Chiridiella macrodactyla*.
a, ♀, lateral view; b, ♀, dorsal view;
c, ♀, head, lateral view; d, ♀, rostrum, ventral view;
e, 2nd maxilla; f, 1st food; g, 2nd foot; h, 4th foot; i, ♂, 5th foot.
(1, 3–5, after Sars; 2, after Farran)

References to Descriptions and Figures.

1. *C. poppei*: Giesbrecht, 1892, Pl. 14, Figs. 14—18, Pl. 36, Figs. 10—12; Giesbrecht & Schmeil, 1898; Wolfenden, 1903; van Breemen, 1908, Fig. 36; A. Scott, 1909, Pl. 1, Figs. 10—17; Wolfenden, 1911; Pesta, 1920, Fig. B 18; Sars, 1924—25, Pl. 15, Figs. 16—18; Rose, 1933, Fig. 58; Rose, 1937a, Fig. 6; Tanaka, 1937, Fig. 5.
2. *C. gracilis*: Farran, 1905 (as *Chiridius poppei*); 1908, Pl. 2, Figs. 1—3; A. Scott, 1909, Pl. 1, Figs. 1—9; With, 1915, Textfig. 21; Sewell, 1929; Rose, 1933, Fig. 61; Tanaka, 1937, Fig. 6, Fig. 7 (as *Chiridius spec.*).
3. *C. obtusifrons*: Vanhöffen, 1897, Fig. 16 (as *Pseudocalanus armatus*); Sars, 1900, Pl. 17 (as *Chiridius armatus*); 1901—03, Pl. 17; Damas & Koefoed, 1907, Fig. 14; van Breemen, 1908, Fig. 37; With, 1915, Pl. 2, Fig. 2, Textfig. 20; Rose, 1933, Fig. 60.
4. *P. armatus*: Boeck, 1872 (as *Euchaeta armata*); Giesbrecht & Schmeil, 1898 (as *E. armata*); Sars, 1901—03, Pls. 15, 16 (as *Chiridius armatus*); Farran, 1903, Pl. 16, Figs. 1—13 (as *C. armatus*); Damas & Koefoed, 1907, Fig. 14 (as *C. armatus*); Vanhöffen, 1907, Pl. 21, Figs. 25, 26, Pl. 22, Figs. 31, 32 (as *C. armatus*); van Breemen, 1908, Fig. 34; Linko, 1913, Pl. 1, Figs. 11, 12, Pl. 2, Figs. 13—22 (as *C. armatus*); With, 1915, Pl. 2, Fig. 3, Textfig. 17 (as *C. armatus*); Wilson, 1932, Fig. 28 (as *C. armatus*); Rose, 1933, Fig. 60 (as *C. armatus*); Jespersen, 1934, Fig. 12 (as *C. armatus*).
5. *C. macrodactyla*: Sars, 1907; Damas & Koefoed, 1907, Fig. 14; Farran, 1908, Pl. 4, Figs. 6—14; A. Scott, 1909, Pl. 36, Figs. 9—21; Sars, 1924—25, Pl. 16, Figs. 1—11; Rose, 1933, Fig. 62.

Distribution

Species

Gulf of Bothnia	—
Gulf of Finland	—
Baltic proper	—
Belt Sea	—
Kattegat	—
Skagerak	4
Northern North Sea	4
Southern North Sea	—
English Channel (eastern)	—
English Channel (western)	—
Bristol Channel and Irish Sea	4
South and West Ireland	1, 2, 4, 5
North-eastern Atlantic	1, 2, 3, 4, 5
Faroe Shetland Area	(4)
Faroe Iceland Area	3, 4
Norwegian Sea	3, 4
Barents Sea	3, 4

References to Work on Biology.

Bigelow (1926) 3, 4; Boeck (1872) 4; van Breemen (1908) 1, 3, 4; Catalogue, etc. (1906, 1909, 1916) 2, 3, 4; Cleve (1900) 4; (1904) 1; Damas & Koefoed (1907) 3, 4, 5; Farran (1903) 4; (1905) 2, 4; (1908) 2, 4, 5; (1920) 2, 4; (1926) 1, 2, 4, 5; (1929) 1, 2; (1936a) 2; Giesbrecht (1892) 1; Jespersen (1923) 3; (1934) 1, 3, 4; (1939) 3, 4; (1939a) 4; (1940) 3, 4; Linko (1913) 4; Lysholm & Nordgaard (1921) 2; Lysholm, Nordgaard & Wiborg (1945) 1, 4, 5; Mrázek (1902) 4; Paulsen (1909) 3, 4; Pesta (1920) 1; Rose (1924) 1; (1933) 1, 2; 3, 4, 5; (1935) 1; (1937) 1; (1937a) 1, 4; Runnström (1932) 4; Sars (1901—03) 3, 4; (1912) 1, 4; (1924—25) 1, 4, 5; A. Scott (1909) 1, 2, 5; Sewell (1929) 2; Tanaka (1937) 1, 2; Vanhöffen (1907) 4; Wiborg (1940) 4; Wilson (1932) 4; (1936, 1942) 1; With (1915) 2, 3, 4; Wolfenden (1911) 1.

References

see Sheet No. 41.